

Title: Superconnections, twisted actions and positive scalar curvature

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Notes: 13 pages, preprint March 1999. Minor changes made: a definition on page 8 and a notation on page 9 & 10. Postscript file can be obtained from
<ftp://ftp.maths.adelaide.edu.au/pure/vmathai/positivearc.ps>

Subj-class: Differential Geometry; Functional Analysis

Abstract: Using Quillen's superconnection formalism we give a new "twisted" approach to the rational Gromov-Lawson-Rosenberg (GLR) conjecture on topological obstructions to the existence of Riemannian metrics of positive scalar curvature on compact spin manifolds. In particular, we present a short proof of the rational GLR conjecture for word hyperbolic groups.